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09/870,325	05/30/2001	David L. Cleary Neubert	6208-019	7702

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CLIFFORD CHANCE US LLP  
31 WEST 52ND STREET  
NEW YORK, NY 10019-6131

EXAMINER

HARBECK, TIMOTHY M

ART UNIT PAPER NUMBER

3628

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/870,325	<b>Applicant(s)</b> CLEARY NEUBERT ET AL.	
	<b>Examiner</b> Timothy M. Harbeck	<b>Art Unit</b> 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magill et al (hereinafter Magill US 2004/0143542) in view of Gianakouros et al (hereinafter Gianakouros US 7,035,819 B1).

**Re Claim 1:** Magill discloses a system and method for interactive electronic open order book for securities transactions comprising the steps of:

- Identifying an NBBO price range (paragraph 0085; nationally disseminated best bid/ask);
- Calculating a midpoint between said buy order price and said sell order price (paragraph 0085) and;

Magill does not explicitly disclose:

- Determining if said buy order price and said sell order price are within said NBBO range (paragraph 0085);
- Determining if said buy order price is not less than said sell order price;
- Matching said buy order and said sell order at said midpoint if said buy order is not less than said sell order price and said buy order price and said sell order price are within said NBBO range (paragraph 0085).

Gianakouros discloses a method and system for facilitating automated interaction of marketable retail orders wherein a determination is made as to whether the buy order price and sell order price are within an NBBO range (Column 1 lines 53-56 and Column 33 line 64-Column 4 line 5 "Retail Marketable Orders."). It would have been obvious to a person of ordinary skill in the art to modify Magill in view of Gianakouros so that the participants in the system receive a higher degree, on average, of price improvement. In requiring that orders are within the NBBO range, the system decreases the odds of outlier bids being place and increases the overall liquidity of the system. By maintaining a level of consistency with regards to the range of bids and offers accepted, the system will be more likely to create a match that is efficient in terms of speed and in terms of price for both parties. Furthermore, matching at the midpoint of the matched offers ensures that the most equitable agreement is reached, without one side of the transaction achieving a higher degree of price improvement than the other.

While the references do not explicitly disclose determining if said buy order price is not less than said sell order price, Official Notice is taken that this step is well known to price improvement systems. If this step was ignored and the sides were matched, then no price improvement occurs. A midpoint in this situation decreases the seller's price and increases the buyer's price, which is not an improvement. It therefore would have been obvious to a person of ordinary skill in the art to modify the references to include determining if said buy order price is not less than said sell order price so that at the very least both parties have a zero net gain in price, but would hope to gain some improvement.

**Re Claim 2:** Magill in view of Gianakouros discloses the claimed method supra and but does not explicitly disclose wherein said NBBO range includes a best offer price, said buy order price is not within said NBBO and said sell order price is within said NBBO range, said method further comprising the steps of;

- Changing said buy order price to a changed buy order price that is equal to said best offer price
- Calculating a midpoint between said changed buy order price and said sell order price and;
- Matching said buy order and said sell order at said midpoint if said changed buy order price is not less than said sell order price (paragraph 0085).

However Magill does allow for the amending of orders (paragraph 0175) and furthermore the step of changing the buy order price equal to the best offer price would be necessary to ensure execution of the order. Gianakouros notes that in requiring orders to be within the NBBO range, the overall liquidity of the method is enhanced because the orders are all relatively close (Column 3 line 64-Column 4 line 23), which increases the speed of execution. Therefore it would have been obvious to include this step so that if an order is received that is outside this range, that it is at the very least brought equal to the allowable parameter so that the order can be executed accordingly and the liquidity of the system is maintained.

**Re Claim 3:** Magill in view of Gianakouros discloses the claimed method supra and but does not explicitly disclose wherein said NBBO range includes a best

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order price, said sell order price is not within said NBBO and said buy order price is within said NBBO range, said method further comprising the steps of

- Changing said sell order price to a changed sell order price that is equal to said best bid price
- Calculating a midpoint between said changed sell order price and said buy order price and;
- Matching said buy order and said sell order at said midpoint if said buy order price is not less than said changed sell order price.

However Magill does allow for the amending of orders (paragraph 0175) and furthermore the step of changing the sell order price equal to the best bid price would be necessary to ensure execution of the order. Gianakouros notes that in requiring orders to be within the NBBO range, the overall liquidity of the method is enhanced because the orders are all relatively close (Column 3 line 64-Column 4 line 23), which increases the speed of execution. Therefore it would have been obvious to include this step so that if an order is received that is outside this range, that it is at the very least brought equal to the allowable parameter so that the order can be executed accordingly and the liquidity of the system is maintained.

**Re Claim 4:** Magill in view of Gianakouros discloses the claimed method supra and but does not explicitly disclose wherein said NBBO range includes a best bid price and a best offer price and said buy order price and said sell order price is not within said NBBO range, said method further comprising the steps of

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- Changing said buy order price to a changed buy order price that is equal to said best offer price (paragraph 0085; last sentence)
- Changing said sell order price to a changed sell order price that is equal to said best bid price (paragraph 0085; last sentence)
- Calculating a midpoint between said changed buy order price and said changed sell order price (paragraph 0085; first sentence) and;
- Matching said buy order and said sell order at said midpoint

However Magill does allow for the amending of orders (paragraph 0175) and furthermore the step of changing both the order prices so that they fall within the allowable range would be necessary to ensure execution of the order. Giankourous notes that in requiring orders to be within the NBBO range, the overall liquidity of the method is enhanced because the orders are all relatively close (Column 3 line 64-Column 4 line 23), which increases the speed of execution. Therefore it would have been obvious to include this step so that if orders are received that are outside this range that they are, at the very least, brought equal to the allowable parameters so that the order can be executed accordingly and the liquidity of the system is maintained.

**Re Claim 5:** Magill discloses the claimed method supra and further discloses wherein said buy order is for a first share amount and said sell order is for a second share amount and wherein the step of matching said buy order and said sell order includes the steps of:

- Matching said buy order and said sell order up to said first share amount if said first share amount is less than said second share amount
  - Matching said buy order and said sell order up to said second share amount if said second share amount is less than said first share amount
- (Page 5, paragraph 0069; partial “fills”).

**Re Claim 6:** Magill in view of Gianakouros discloses the claimed method 1 supra and while Magill does not explicitly further disclose the step comprising a second buy order having a second buy order price above said midpoint and less than said buy order price, wherein the step of matching said buy order and said sell order includes the steps of: calculating a cross point equal to said second buy order price plus an increment and matching said buy order and said sell order at said cross point, this step would have been obvious to anyone skilled in the ordinary art at the time of invention.

Magill explicitly discloses that one of the objectives of the invention is to provide a securities trading system which includes an Interactive Open Order Book capable of allowing subscribers via the Internet to aggregate, manipulate, display and interact with the buy and sell order data (Page 1, paragraph 0007). This broad objective is meant to achieve the goal of providing both the seller and buyer of a security with optimum price discovery that would be beneficial to both sides. Magill also discloses that the price discovery of buy and sell orders is dynamic, relative to the bids and offers of the subscribers (page 4, paragraph 0062). With these two things in mind, it would have been an objective of Magill to account for all possible scenarios where both parties



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could potentially benefit by using the system. A subscriber would therefore be motivated to use the method of Magill to seek a better deal on the transaction.

**Re Claim 7:** Claim 7 is similar in scope to claim 6 regarding the prior art and particularly the rationale and would therefore be rejected along the same lines with the same motivation.

**Re Claim 8:** Magill in view of Gianakouros discloses the claimed method supra and further discloses the step wherein said buy order is selected from a plurality of buy orders each having a buy order price and wherein said buy order price of said selected buy order is greater than said buy order price of any other of said plurality of buy orders. Magill discloses that the "preferred embodiment employs an order matching algorithm designed to seek the best mutual matching price (Page 6, paragraph 0085)." Seeking the highest buy order price from a list of buy orders would be the best price for the seller and would therefore fulfill the objective of the invention.

**Re Claim 9:** Magill in view of Gianakouros discloses the claimed method supra and while not explicitly disclosing the step of selecting said buy order ahead of a second buy order having a second buy order price equal to said buy order price of said buy order wherein said second buy order is a proprietary order, this step would have been obvious to someone skilled in the ordinary art at the time of invention. As admitted by the applicant in page 3 of the disclosure, a financial institution is obligated to seek the best execution for a particular customer order. If the customer's orders are sacrificed for the proprietary orders, the institution will not be seeking the best execution for the

customer but rather for itself and would therefore be in violation of this business principle and would risk losing future business from customers.

**Re Claim 10:** Magill in view of Gianakouros discloses the claimed method supra and Magill further discloses the step wherein said buy order is an agency order having an order time and further comprising the step of; selecting said buy order ahead of a second buy order having a second buy order price equal to said buy order price of said buy order, wherein said second buy order is an agency order having a second order time and wherein said order time is prior to said second order time (page 3, paragraph 0031; note paragraph 0031 begins on page 2).

**Re Claim 11:** Magill in view of Gianakouros discloses the claimed method supra and Magill further discloses the step wherein said buy order is a proprietary order having an order time and further comprising the step of selecting said buy order ahead of a second buy order price equal to said buy order price of said buy order, wherein said second buy order is a proprietary order having a second order time and wherein said order time is prior to said second order time (page 3, paragraph 0031; note paragraph 0031 begins on page 2).

Claims 12-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magill in view of Gianakouros in view of Lupien et al (hereinafter Lupien, US Pat 5,689,652).

**Re Claim 12:** Magill in view of Gianakouros discloses the claimed method 1 as previously shown, but does not explicitly disclose a crossing network for matching said buy order and said sell order, said crossing network receiving a plurality of pass-through orders and a plurality of passive orders.

Lupien discloses a crossing network that matches buy and sell orders based upon a satisfaction and quality profile (see abstract). Lupien further discloses that typically the matching process is anonymous (passive), however the buy and sell orders are not required to be confidential (pass through).

It would have been obvious to someone skilled in the ordinary art at the time of invention to include the teachings of Lupien to the disclosure of Magill in view of Gianakouros, so that there is an efficient system in place to both record buy and sell orders in a database, compare said buy and sell orders and match orders appropriately.

**Re Claim 13:** Magill in view of Gianakouros in view of Lupien discloses the claimed method supra and Lupien further discloses the step wherein said buy order and said sell order are included in said plurality of pass-through orders (see abstract). Lupien states that typically the orders are anonymous, which leaves open the possibility for pass through orders.

**Re Claim 14:** Magill in view of Gianakouros in view of Lupien discloses the claimed method supra and Lupien further discloses the step wherein said buy order and said sell order are included in said plurality of passive orders (see abstract). Lupien states that typically the orders are anonymous (passive).

**Re Claim 15:** Magill in view of Gianakouros in view of Lupien discloses the claimed method supra and Lupien further discloses the step wherein one of said buy order and said sell order is included in said pass-through orders and one of said buy order and said sell order is included in said passive orders (see abstract). Lupien states that typically the orders are anonymous, which implies that they while the majority may be passive orders, the possibility for pass-through orders remains.

**Re Claim 16:** Magill in view of Gianakouros in view of Lupien discloses the claimed method supra and Lupien further discloses the step wherein said passive orders are blind orders (see abstract). Lupien states that typically the orders are anonymous with regards to the matching system. For the orders to be truly anonymous, then no one should be allowed to view the orders submitted by the anonymous parties (blind order as defined by applicant).

**Re Claim 17:** Magill in view of Gianakouros in view of Lupien discloses the claimed method 12 supra. Magill further discloses an order router in communication with an external destination (page 1, paragraph 0007; exchange). Magill does not explicitly disclose wherein said order router is in communication with said crossing network and said order router receives at least a portion of said pass-through orders from said crossing network and forwards said at least a portion of said pass through orders to said at least one external order destination.

However, it has been established in the rejection of claim 12 that one would be motivated to use a crossing network as taught by Lupien in connection with the system of Magill in view of Gianakouros in order to more fully and efficiently process buy and

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sell orders. The system of Magill in view of Gianakouros has the ability to communicate and route orders with external exchanges so it would thus also be obvious, along those same lines that the crossing network would be in communication with the order router to the external exchanges. In this way, if a buy or sell order cannot be matched, via the crossing network, with others from the order book, said orders can be forwarded to external exchanges to complete the transactions. One would again be motivated to do this to add further liquidity to the system and allow for orders to be processed even if an initial match does not occur. It would also follow then that at least some of the pass-through orders and some of the passive orders not processed by the crossing network would be forwarded to the router to be sent to the external exchanges.

**Re Claim 18:** Magill in view of Gianakouros in view of Lupien discloses the claimed method supra and while the references do not explicitly disclose the step wherein said at least a portion of said pass through orders that have not been matched by said crossing network, this would be obvious because the first priority of both the Magill and the Lupien systems is to match the orders with other orders entered into the system. Communication with external exchanges would only occur if the order could not be matched on the crossing network. An order that could be matched on the crossing network would not be forwarded to another destination because the crossing network can provide the best value for the participant via price discovery with other participants of the crossing network.

**Re Claim 19:** Magill in view of Gianakouros in view of Lupien disclose the claimed method supra and while the references do not explicitly disclose the step

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wherein a portion of said pass-through orders are forwarded to at least one external destination after a time delay, this would have been obvious to someone skilled in the ordinary art at the time of invention because the first priority of both the Magill and Lupien systems is to match the orders with other orders entered in the system.

Communication with external exchanges would only occur if the order could not be matched on the crossing network. An order that could be matched on the crossing network would not be forwarded to another destination because the crossing network can provide the best value for the participant via price discovery with other participants of the crossing network. A time delay would be necessary to give the crossing network an opportunity to match the order, as well as wait for potential counter offers to be sent to the network.

**Re Claim 20:** Magill in view of Gianakouros in view of Lupien discloses the claimed method supra and Magill further discloses wherein the step of identifying an NBBO range includes the step of receiving an updated NBBO (Page 4, paragraph 0062). Magill notes that the midpoint number changes in direct relationship to changes in the NBBO, which implies that changes in the NBBO are received on a continuous basis.

**Re Claim 21:** Further system claims would have been necessary to perform previously rejected method claims 12 and 17 and therefore are rejected using the same art and rationale.

**Re Claims 22-24:** Further system claims would have been necessary to perform previously rejected method claims 16, 18 and 19 respectively and are therefore rejected using the same art and rationale.

**Re Claims 25-36:** Further system claims would have been necessary to perform previously rejected method claims 1-11 and 20 respectively and are therefore rejected using the same art and rationale.

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 4/25/2006, with respect to the rejection(s) of claim(s) 1-36 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the newly found prior art.

Gianakouros discloses a method and system for facilitating automated interaction of marketable retail orders wherein a determination is made as to whether the buy order price and sell order price are within an NBBO range (Column 1 lines 53-56 and Column 33 line 64-Column 4 line 5 "Retail Marketable Orders."). It is the examiners contention that in viewing Gianakouros in view of the previously applied Magill reference a person of ordinary skill would have had the appropriate references and proper motivation to create the claimed invention.

Furthermore Gianakouros discloses a crossing network similar to the one disclosed in the present application (See Column 8 line 29-Column 11 line 14). However the examiner believes that the previously referenced Lupien reference is still sufficient. Applicant claims that the present invention is not rendered obvious over in

view of Lupien at least with respect to the limitation of passive orders. Lupien does however utilize the "cross only" function as defined by the applicant (see Figure 8) so that the order is only matched within financial institution. The examiner reserves the right to apply the crossing network of Gianakouros however should the applicant successfully traverse the current rejections.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Harbeck whose telephone number is 571-272-8123. The examiner can normally be reached on M-F 8:30-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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JIMMY SONGH  
PATENT EXAMINER  
TECHNOLOGY CENTER 3600